



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/SE99/02104 <b>(22) International Filing Date:</b> 17 November 1999 (17.11.99) <b>(30) Priority Data:</b> 9804171-8                      1 December 1998 (01.12.98)                      SE <b>(71) Applicant (for all designated States except US):</b> TELEFON-AKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-126 25 Stockholm (SE). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> ENGSTRAND, Rolf, Georg [SE/SE]; Sättagårdsvägen 213, S-127 36 Skärholmen (SE). LANDBERG, Christer [SE/SE]; Vädursvägen 1A, S-141 33 Huddinge (SE). <b>(74) Agents:</b> JOHANSSON, L., E. et al.; Albihns Patentbyrå Stockholm AB, P.O. Box 5581, S-114 85 Stockholm (SE).		<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

**(54) Title:** QUEUE MANAGEMENT IN PACKET SWITCHED NETWORKS**(57) Abstract**

In a multipoint-to-point link, packets (T) are transmitted over a shared medium to a central node (10) in response to permits (TP). The central node (10) issues permits to a multipoint node (20) on the basis of a queue size record (11) held at the central node. The queue record is updated on receipt of a queue size report (request for permits) (RP) from the multipoint node. Due to the transmission delays across the link, an erroneous queue value can be recorded at the central node when permits and a request for permits are sent at about the same time. This problem is overcome and the transfer capacity improved when the central node holds a record of the permits sent during the preceding round trip delay. Any incoming request for permits is then adjusted by the number of stored permits before it is utilised to update the queue record.

